Arthrodesis Radiologically Mimicking Ankylosing Spondylitis

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A 73-year-old male with back pain was hospitalized for managing new onset T9 compression fracture. The initial radiograph of T-spine showed kyphotic angulation of lower thoracic spine with syndesmophyte formations anteriorly and bridging bony lesions posteriorly (Figure 1), which was reported as suggestive of ankylosing spondylitis (AS) by radiologist. So he was consulted to rheumatologist to rule out AS.

His back pain has been persistent for several decades and tended to be relieved by rest. The range of motion in thoracic and lumbar spine was not checked fully because of severe back pain, however, the movement of cervical spine was perfectly saved. In laboratory data, erythrocyte sedimentation rate and C-reactive protein was 71 mm/h and 1.1 mg/dL. However, human leukocyte antigen-B27 allele was absent.

We discussed again with senior musculoskeletal radiologist about the radiologic findings, because clinical features and radiographic findings were not consistent. An incision scar on his back was found on spine magnetic resonance imaging (Figure 2A) and large bony defect with deformity on both iliac crest was identified on pelvic simple X-ray as a sequelae of previous bone harvest site (Figure 2B). We repeatedly done a history taking then we confirmed his history of total laminectomy with posterior lumbar fusion operation using a bone-graft [1] for certain

Figure 1. (A) T-spine X-ray, lateral. (B) Spine magnetic resonance imaging: Newly appeared compression fracture at T9 and segmental cord signal change at T9 level (white arrow head). Posterolateral fusion mass on T7-L1 that was misinterpreted as bony bridge were shown (white arrows). Additionally, bulging disc and facet arthrosis were shown at multiple level of spine.
spine fracture more than 40 years ago. Finally, we con-
cluded that the spinal ankylosis was not a result of AS.

The case was initially suspected as AS due to insufficient
history taking and lack of experience of a young
radiologist.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article
was reported.

REFERENCE

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